

Worker Safety and Health Enforcement Program Update

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<http://energy.gov/ea/services/enforcement>

Worker Safety and Health Enforcement Activities

Notices of Violation	
Battelle Energy Alliance, LLC	Worker burn – molten salt
Fluor-B&W Portsmouth, LLC	Mechanized material handling events
Lawrence Livermore National Security, LLC	Worker burn – sulfuric acid
Sandia Corporation	Liquid lithium fire/explosion
Stanford University	Laser safety program
University of California	Worker electrical shock
Pacific Data Electric, Inc.	



Worker Burns from Molten Salt Experiment Battelle Energy Alliance/Idaho National Laboratory

- INL Researcher sustained second and third degree burns
- Regulatory deficiencies:
 - Work planning and control – vague work scope
 - No workplace exposure monitoring
 - Inappropriate/insufficient hazard controls
 - Pressure safety deficiencies
 - Management/supervisory oversight of research
- Five violations - \$168,750 civil penalty
 - Mitigation for self-critical analysis of event and broad corrective actions to address safety in research



Mechanized Material Handling Events Portsmouth Gaseous Diffusion Plant

- Fluor-B&W Portsmouth (prime) and three subcontractors
- Investigation of three events:
 - Excavator Arm/Boom Contacts De-energized Overhead Power Lines
 - Mobile Crane Tips Forward
 - Excavator Strikes Overhead Fiber Optics Line
- FBP PNOV for three violations associated with crane tipover
 - Unplanned work - supervision
 - OSHA Truck cranes requirement
 - Worker training and information
- \$150,000 contract fee reduction
- Corrective actions address regulatory violations and legacy safety culture issues



Sulfuric Acid Burn

Lawrence Livermore National Security, LLC - LLNL

- Chemical reaction during high explosives synthesis at Site 300
- Three workers – dermal and inhalation exposures
- Regulatory deficiencies
 - Equipment configuration and assessment of synthesis process
 - Inadequate PPE – pre- and post-event
 - Emergency response
 - Exposure assessment
 - Scale-up of research activities
 - Pressure relief valve
- Six violations - \$365,000 contract fee action
- LLNS revisions to laboratory work planning and control process



Liquid Lithium Fire/Explosion

Sandia Corporation – Sandia National Laboratories

- Near miss to serious injury or fatality during final setup of equipment
- Regulatory deficiencies
 - Changing hazards during experiment setup
 - Exposure assessment against safety and health standards
 - Pressure safety
 - Medical response and evaluation
- PNOV cites Sandia for seven violations
- NNSA waived \$412,500 civil penalty based on corrective actions and safety culture improvements

Laser Safety Program

Stanford University – SLAC National Accelerator Laboratory

- Laser and electron beam equipment events
- Four events revealed program implementation deficiencies:
 - Engineering and administrative controls
 - PPE
 - Medical evaluation post-event
- Four violations - \$250,000 contract fee reduction
- DOE recognition of Stanford's corrective actions



Electrical Shock

Lawrence Berkeley National Laboratory

- University of California (prime) and two subcontractors
- 277-volt shock of apprentice electrician during building energization and commissioning
- UC PNOV
 - Ensure subcontractors effectively implement WSHP and NFPA 70E requirements
 - \$56,910 contract fee reduction
- PDE PNOV
 - NFPA 70E implementation
 - \$7,500 mitigated civil penalty
- PNOV's acknowledge corrective actions to prevent recurrence

Worker Safety and Health Enforcement Activities (cont'd)

Enforcement Letters	
Multiple NNSA Contractors	Roof Asset Management Program subcontractor oversight
LVI Services, Inc.	Contact with energized overhead power line
Wise Services, Inc.	Contact with energized communications and high voltage lines
Webcor Builders	Worker electrical shock

Consent Orders	
Battelle Memorial Institute	Beryllium Program
Fluor-B&W Portsmouth, LLC	Asbestos Program



Worker Safety and Health Enforcement Activities (cont'd)

Current Investigations
Underground Truck Fire
Hand Injury - Explosives Detonator
Lithium Ion Battery Fire
Material Handling and Ergonomics Program
Worker Injury – Drum Rupture
Partial Finger Amputation
Electrical Safety Program Implementation



Themes from WSH Enforcement Activities

- Risk characterization
- Subcontractor oversight
- Contract transition
- Hierarchy of controls
- Manual material handling/ergonomic hazards
- Emergency management
 - Medical emergency planning
 - Post-event response
- Recurrence of violations



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Questions?

